Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

6/29/01

species combo-subcombo

Listing of Claims:

1-35 (Cancelled)

36. (New) A method of policing transfer of packets, each packet belonging to one of a plurality of ordered traffic classes where each traffic class is allocated a respective committed information rate, the method comprising:

receiving arriving packets of a first traffic class from among said plurality of ordered traffic classes;

identifying conforming packets of said first traffic class according to a first committed information rate; and

identifying conforming packets of each successive traffic class based on:

a combination of arriving packets of said each successive traffic class and conforming packets of all preceding traffic classes; and

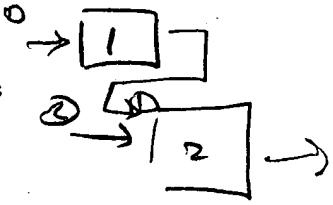
a sum of committed information rates of all preceding traffic classes and a committed information rate of said each successive traffic class.

Claim 36

37. (New) An apparatus for policing transfer of packets, each said packet belonging to one of a plurality of traffic classes, said apparatus comprising:

Policy

a first policer for determining conformance of arriving first-class packets belonging to a first traffic class from among said plurality of traffic classes according to a first committed information rate and marking each of conforming first-class packets as a conforming first-class packet; and

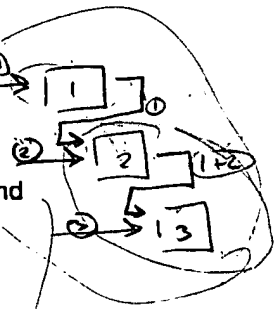


a second policer for determining conformance of arriving second-class packets belonging to a second traffic class from among said plurality of traffic classes said second policer receiving a combination of said conforming first-

class packets and said arriving second-class packets and policing said combination according to a sum of said first committed information rate and a second committed information rate;

wherein said second policer marks each of conforming second-class packets as a conforming second-class packet.

38. (New) An apparatus for policing transfer of packets, each packet belonging to one of a plurality of traffic classes where each traffic class is allocated a respective committed information rate, said apparatus comprising a cascade of policers having a one-to-one correspondence to said traffic classes, wherein a first policer of said cascade of policers identifies conforming packets of a first traffic class from among said plurality of traffic classes according to a first committed information rate, and wherein each policer, excluding said first policer, of said cascade of policers:



receives a combination of arriving packets of a corresponding traffic class and conforming packets identified by all preceding policers; and

identifies conforming packets of said corresponding traffic class based on said combination according to a sum of committed information rates of all preceding traffic classes and a committed information rate of said corresponding traffic class.

39. (New) A method of policing a plurality of K traffic classes of a service, K exceeding one, said method comprising:

$\sum_{i=1}^{K} B_i$

classifying said K traffic classes as traffic-class 1 to traffic-class K;

verifying conformance of packets of traffic-class 1 to a first pre-assigned guaranteed service rate;

determining a cumulative guaranteed service-rate for traffic-class j, $2 \le j \le K$, as the sum of said first pre-assigned guaranteed service rate and pre-assigned guaranteed service rates for each of traffic-classes 2 to j;

Pack classification

establishing conformance of packets of traffic-class j, $2 \leq j \leq K$, taken in combination with conforming packets of traffic-class 1 to traffic-class (j–1), to said cumulative guaranteed service rate;

marking a packet of traffic-class 1, which packet results in exceeding said first predefined guaranteed service rate, as a non-conforming class-1 packet; and

marking packets of traffic-class j, $2 \leq j \leq K$, which packets in combination with conforming packets of traffic-class 1 to traffic-class (j–1) results in exceeding said cumulative guaranteed service rate as non-conforming class-j packets.

40. (New) The method of claim 39 wherein said verifying is based on a leaky-bucket mechanism associated with said traffic-class 1 and said establishing is based on a leaky-bucket mechanism associated with said traffic-class j.

41. (New) The method of claim 39 wherein said establishing comprises a step of generating policing units at a rate reflective of said cumulative guaranteed service rate.

42. (New) The method of claim 39, further comprising the steps of:

marking individual packets of traffic-class 1, which packets collectively conform to said first predefined guaranteed service rate, as conforming class-1 packets; and

marking individual packets of traffic-class j, $2 \leq j \leq K$, which packets in combination with conforming packets of traffic-class 1 to traffic-class (j–1) collectively conform to said cumulative guaranteed service rate, as conforming class-j packets.

43. (New) The method of claim 39 wherein K=4 and said plurality of K traffic classes comprise:

a class of expedited-forwarding differentiated-service specified by the Internet Engineering Task Force;

a class of assured-forwarding-1 service specified by the Internet Engineering Task Force;

a class of assured-forwarding-2 service specified by the Internet Engineering Task Force; and

a class of best-effort service.

44. (New) The method of claim 39 wherein said classifying reflects a predetermined priority order.

45. (New) A processing-platform having a memory and executable instructions stored thereon, which when executed:

classifies K traffic classes of a service as traffic-class 1 to traffic-class K, K exceeding one;

associates a pre-assigned guaranteed service rate with each of said K traffic classes;

determines a cumulative guaranteed service-rate for traffic-class j, $1 \leq j \leq K$, as the sum of said pre-assigned guaranteed service rate associated with each of traffic class 1 to traffic-class j;

identifies conforming packets of traffic-class 1 according to said pre-assigned guaranteed service rate associated with traffic-class 1; and

identifies conforming packets of traffic-class-j, $j>1$, combined with conforming packets of each traffic-class m, where m is less than j, according to said cumulative guaranteed service-rate.

46. (New) The processing-platform of claim 45 having further executable instructions, which when executed:

identifies a violating packet of traffic-class j which packet results in exceeding said cumulative service rate as a non-conforming packet; and

marks said violating packet as a non-confirming packet.

47. (New) An apparatus for policing a plurality of traffic classes of a service, said apparatus comprising:

a first policer for marking each packet of a first traffic class from among said plurality of traffic classes according to conformance of said each packet to a first pre-assigned guaranteed service rate; and

a plurality of successive policers each said successive policer provided for a specific traffic class from among said plurality of traffic classes for marking every packet of said specific traffic class according to conformance of said every packet, taken in combination with other packets of said specific traffic class and certain packets of preceding traffic classes, to an aggregate service rate.

48. (New) The apparatus of claim 47 wherein said aggregate service rate equals a sum of guaranteed service rates each pre-assigned to one of said preceding traffic classes, including said first pre-assigned guaranteed service rate.

49. (New) The apparatus of claim 48 further comprising a leaky-bucket mechanism associated with said first policer and a leaky-bucket mechanism associated with each of said successive policers.

50. (New) The apparatus of claim 49 wherein said conformance of said each packet of said first traffic class is determined by means of said leaky-bucket mechanism associated with said first policer and said conformance of said every packet of said specific traffic class is determined by means of said leaky-bucket mechanism associated with said each of said successive policers.

51. (New) The apparatus of claim 50 wherein said certain packets of said preceding traffic classes are conforming packets.

52. (New) An apparatus for policing packets of a plurality of traffic classes of a service, said traffic classes arranged in a predetermined order, said apparatus comprising a plurality of policers having a one-to-one correspondence to said traffic classes, a first policer of said plurality of policers being assigned a policer service rate equal to a pre-assigned service rate of a first traffic class of said plurality of

traffic classes, and each succeeding policer assigned a respective policer service rate determined as a sum of a pre-assigned service rate of a corresponding traffic class and a policer service rate of a preceding policer, wherein:

said first policer polices traffic comprising all packets of said first traffic class to produce an output of said first policer comprising at least one conforming packet; and

said each succeeding policer polices aggregate traffic comprising all packets of said corresponding traffic class and conforming packets at output of said preceding policer to produce an output of said each succeeding policer comprising conforming packets.

53. (New) The apparatus of claim 52 wherein said output of said each succeeding policer includes nonconforming packets marked accordingly.